

Claim Sheets Marked Up to Show Changes

9. (Amended) An apparatus for cleaning flat media carriers, comprising:

a rotor rotatably mounted within a chamber;

[a first inside] an array of nozzles [and a first outside array of nozzles] arranged to spray fluid onto a media carrier on the rotor;

a [first] control valve connected by a [first] fluid line to [the first inside array of] one or more of the nozzles;

a [first] water inlet line for providing water to the [first] control valve;

[a first flow meter for measuring water flow through the first water inlet line;

a second control valve connected by a second fluid line to the first outside array of nozzles;

a second water inlet line for providing water to the second control valve;

a second flow meter for measuring water flow through the second water inlet line;]

a [surfactant storage vessel] detergent source;

a [first surfactant] detergent injection line connecting the [surfactant storage vesssel] detergent source to the [first] control valve; and

a [first] metering pump in the [first surfactant] detergent injection line for pumping [surfactant directly] detergent from the [surfactant storage vessel to the first].

detergent source to the control valve at a controllable pumping rate;

a second surfactant injection line connecting the surfactant storage vessel to the second control valve;

a second metering pump in the second surfactant injection line for pumping surfactant directly from the surfactant storage vessel to the second control valve at a controllable pumping rate;

a pressurized water source connectable to the first and second inlet water lines].

11. (Amended) An apparatus according to Claim 9 further comprising a boost pump connected to the water source for providing a desired inlet water pressure to the [first and second] water inlet line[s].

13. (Amended) An apparatus according to Claim 9 further comprising a [surfactant] detergent return line connected between the [first surfactant] detergent injection line [proximate the first control valve] and the [surfactant storage vessel] detergent source for providing a return path for [surfactant back to the surfactant storage vessel] detergent back to the detergent source.

14. (Amended) An apparatus according to Claim 9 further comprising a recirculation line connected between the [first] water inlet line [proximate the first control valve] and [the] a water source for providing a recirculation path for water back to the water source.

15. (Amended) An apparatus according to Claim 9 wherein the [first] control valve comprises a mixing control valve for mixing the water and [surfactant] detergent.

16. (Amended) An apparatus for cleaning media carriers, comprising:

a rotor rotatably mounted within a chamber;

[a plurality of media carriers insertable into the chamber onto the rotor;

an inner array of] a spray manifold having nozzles disposed in the chamber and arranged to spray fluid [onto the media carriers on] towards the rotor;

[an outer array of nozzles disposed in the chamber and arranged to spray fluid onto the media carriers on the rotor;]

a [first] control valve connected by a [first] fluid line to the [inner array of nozzles] spray manifold;

a [first] water inlet line for providing water to the [first] control valve;

[a second control valve connected by a second fluid line to the outer array of nozzles;

a second water inlet line for providing water to the second control valve;

a surfactant storage vessel;

a first surfactant] a detergent source;

a detergent injection line connecting the [surfactant storage vessel to the first] detergent source to the control valve;

a [first] metering pump [in the first surfactant] associated with the detergent injection line [for pumping surfactant from the surfactant storage vessel to the first control valve at a controllable pumping rate;

a second surfactant injection line connecting the surfactant storage vessel to the second control valve;

a second metering pump in the second surfactant injection line for pumping surfactant from the surfactant storage vessel to the second control valve at a controllable pumping rate;

a water source connected to the first and second control valves]; and

means for controlling pumping rate of [each of] the [first and second] metering pump[s] to produce a desired [surfactant] detergent concentration in the [surfactant] detergent/water mixture[s being] provided [in the first and second fluid lines to each of the inner and outer arrays of nozzles] to the spray manifold.

17. (Amended) An apparatus according to Claim 16 further comprising a [first] flow meter [disposed in] associated with the [first] water inlet line for measuring a flow rate of water [being] provided to the [first] control valve[;

a second flow meter disposed in the second water inlet line for measuring flow rate of water being provided to the first control valve].

18. (Amended) An apparatus according to Claim 16 wherein the [first] control valve comprises a mixing control valve for mixing the [surfactant] detergent and the water.

19. (Amended) An apparatus according to Claim 16 further comprising a [surfactant] detergent return line connected between the [first surfactant] detergent injection line proximate the [first] control valve and the [surfactant storage vessel for

providing a return path for surfactant back to the surfactant storage vessel] detergent source.

20. (Amended) An apparatus according to Claim 16 further comprising a recirculation line connected between the [first] water inlet line proximate the [first] control valve and [the] a water source for providing a recirculation path for water back to the water source.

22. (Amended) An apparatus according to Claim 16 wherein [said first] the metering pump comprises a positive displacement diaphragm pump, and wherein said means for controlling a pumping rate of the [first] metering pump comprises means for adjusting pumping speed.

23. (Amended) An apparatus according to Claim 22 wherein said means for controlling pumping rate of the [first] metering pump further comprises means for adjusting pump stroke length.